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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,896	04/27/2005	Jean-Francois Pfister	16824-6	9334

7590

05/02/2006

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EXAMINER
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ROST, ANDREW J

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/532,896	PFISTER, JEAN-FRANCOIS	
	Examiner	Art Unit	
	Andrew J. Rost	3751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/27/2005</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is in response to the Preliminary Amendment filed on 1/09/2006. Claims 1-6 have been cancelled. No claims were amended. Claims 7-12 have been newly added. Presently, claims 7-12 are pending.

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 13. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure contains the following informalities:

The specification improperly refers to the claims by stating "in accordance with claim 1" on page 2, line 16. The specification should not refer to the claims.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 7 recites the limitation "the threaded portion (12)" in claim 7, claim line 3. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 7 recites the limitation "the characteristic  $\tan(\alpha)$ " in claim 7, claim line 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobashi et al. (4,480,614).

Regarding claim 7, Kobashi et al. disclose an idling speed control device that has a linear actuator having a motor portion (step motor 9), an actuator portion having a

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rotatable member (valve shaft 20) with a threaded portion (screw threads 29) and a linear displacement threaded bolt (40) that is a part of a rotor (21) that is supported by bearings (43, 45) and the presence of a coil spring (39) between the casing of the actuator and a valve head (35) with the threads of the threaded portion of the rotatable member formed at an angle to allow rotation of the rotatable member when the rotor is rotated by the motor portion and the rotatable member is reversible (as the rotor rotates, the valve shaft 20 is caused to move in one direction and when the rotor is rotated in the opposite direction, the valve shaft is moved in a direction opposite the first direction as described in cols. 7-8, lines 56-7). The valve shaft is reversible and would than inherently have the structure required for having "the characteristic  $\tan(\alpha)$  is greater than the friction coefficient  $\mu$  between the threaded bolt and the rotatable member.

In regards to claim 8, Kobashi et al. disclose the threaded portion has at least two threads (Fig. 2).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobashi et al. in view of Bock (4,393,319).

Kobashi et al. disclose a linear actuator having a motor, and actuator device portion, a rotatable member with a threaded portion and a spring located between the actuator casing and valve head. Kobashi et al. do not disclose the spring located around a portion of the casing. However, Bock teaches placing a spring of a linear actuator between the valve head and around a portion of the casing in order to stabilize and secure the spring to the casing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place a projection of the casing as taught by Bock through the spring and surrounding the valve shaft of Kobashi et al. in order to stabilize and secure the spring.

12. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobashi et al. in view of Hutchins (5,146,126).

In regards to claim 10, Kobashi et al. disclose a linear actuator having a motor, and actuator device portion, a rotatable member with a threaded portion and a spring located between the actuator casing and valve head. Kobashi et al. do not disclose a partition wall between the motor portion and the actuator portion. However, Hutchins teaches the use of an isolation tube placed between a stator and a rotor of an actuator in order to isolate hydraulic fluid from the motor portion (col. 2, lines 63-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place an isolation tube as taught by Hutchins between the motor portion and rotor portion of Kobashi et al. in order to isolate the motor portion from hydraulic fluid.

In regards to claims 11 and 12, the modified Kobashi et al. reference discloses placing bearings, cover, rotatable member and a holding member for supporting the valve shaft in the isolation tube and being held by an interference fit.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukaya et al. (4,764,696) disclose a step motor having a rotor, motor portion, valve head and spring. Akkerman (5,195,721) discloses a valve actuator having a motor and a ball nut configuration to rotate a valve head. Fukui et al. (5,129,273) disclose an actuator having a motor and ball nut arrangement to operate a linear actuator. Conner (4,179,944) discloses a reversible linear actuator having a rotatable threaded sleeve with corresponding threaded screw.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:30-5 M-Th and 7:30-5 every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew J Rost  
Examiner  
Art Unit 3751



JUSTINE R. YU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

4/27/06